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# NOTES ON *HAEMANTHUS* L.: THE IDENTITY OF *HAEMANTHUS AMARYLLOIDES* JACQ.

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## ABSTRACT

Baker's usage of the name *Haemanthus amarylloides* Jacq., in the *Flora Capensis* (1896), for a species from the eastern Cape and Transvaal, is considered to be mistaken. The correct name for *H. amarylloides* sensu Baker, is *H. montanus* Baker, while the name *H. amarylloides* Jacq. must be applied to a species from Namaqualand. *H. montanus* Baker and *H. amarylloides* Jacq., including a new subspecies *H. amarylloides* Jacq. subsp. *polyanthus* Snijman, are described and both subspecies of *H. amarylloides* Jacq. are illustrated.

## UITTREKSEL

### NOTAS OOR *HAEMANTHUS* L.: DIE IDENTITEIT VAN *HAEMANTHUS AMARYLLOIDES* JACQ.

In die *Flora Capensis* (1896) word die naam *Haemanthus amarylloides* Jacq. deur Baker foutief gebruik vir 'n spesie uit die oostelike Kaapprovinsie en Transvaal. Die korrekte naam vir *H. amarylloides* sensu Baker is *H. montanus* Baker, terwyl die naam *H. amarylloides* Jacq. toegepas moet word op 'n soort uit Namakwaland. *H. montanus* Baker en *H. amarylloides* Jacq., insluitende 'n nuwe subspesie *H. amarylloides* Jacq. subsp. *polyanthus* Snijman word beskryf. Albei subspecies van *H. amarylloides* Jacq. word geïllustreer.

## INTRODUCTION

Baker in his *Handbook of the Amaryllidaceae* (1888) and the *Flora Capensis* (1896) applied the name *Haemanthus amarylloides* Jacq. to specimens collected from the eastern Cape Province and the Transvaal. Critical comparison of Jacquin's original description and accompanying plate, with the material cited by Baker as *H. amarylloides* Jacq., as well as several recent collections from the same area, reveal however, several discrepancies which are discussed below.

## FEATURES OF *HAEMANTHUS AMARYLLOIDES* JACQ.

*Haemanthus amarylloides* sensu Baker has inflorescences with 5–8 spathe valves, white flowers which age to a delicate pink and leaves which appear at the time of flowering. Jacquin's description in contrast states that the num-

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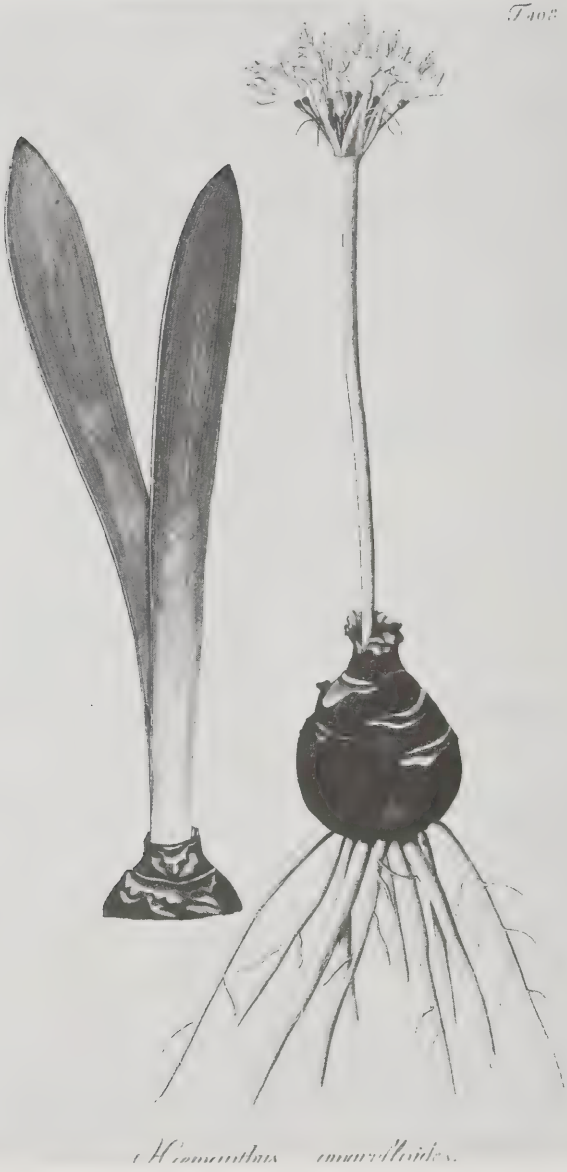

FIG. 1.
*Haemanthus amarylloides* Jacq. Plate from Jacquin (1804, Table 408).

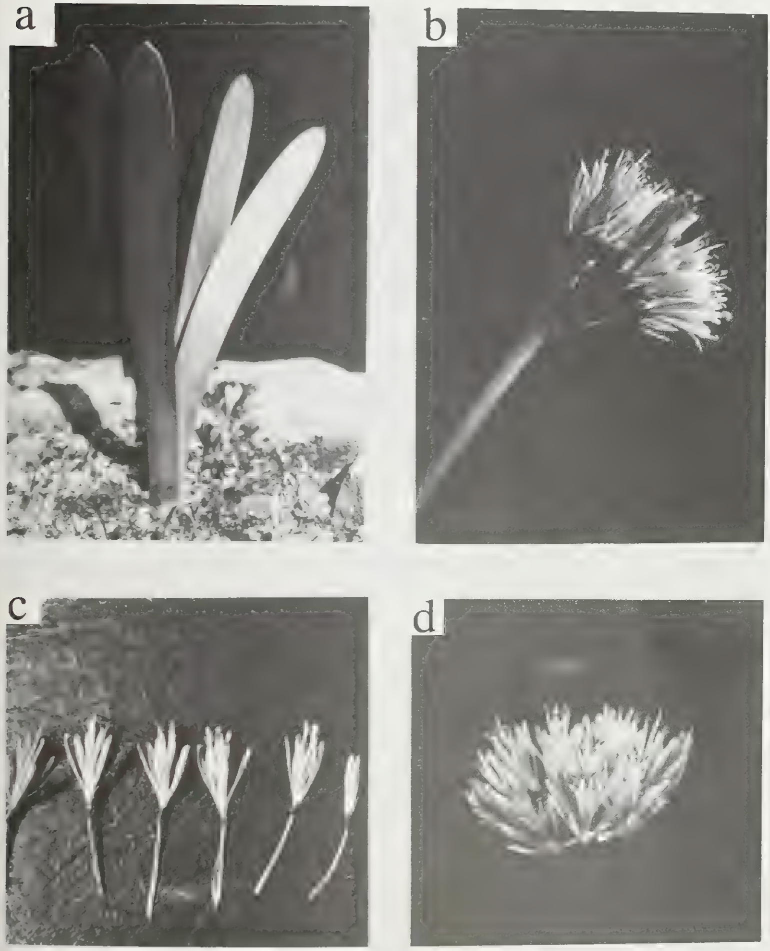

FIG. 2.
*Haemanthus amarylloides* Jacq. subsp. *amarylloides* (*M. Thomas*, Vanrhyns Pass). a, leaves × $\frac{1}{3}$ (two bulbs are depicted). b, d, inflorescence × $\frac{1}{2}$. c, individual flowers × $\frac{3}{4}$.

ber of spathe valves surrounding the umbel is 4, that the leaves are produced only after the inflorescence has withered and the colour of the flowers, as seen in Jacquin's plate, is rosy pink.

A much closer match with Jacquin's description are the fairly recent collections, *M. Thomas s.n.* and *W. F. Barker 9785*, from Vanrhyns Pass in the north-western Cape, as well as other gatherings from Namaqualand. These specimens, until now, have been included erroneously in the species *H. pumilio* Jacq., a species which, in the strict sense, is restricted to the Stellenbosch flats in the south-western Cape. *H. pumilio* differs in having consistently narrow (5–15 mm wide), twisted leaves. The Vanrhyns Pass specimens match Jacquin's description of *H. amarylloides* in all respects, notably the inflorescences which have 4 spathe valves, flowers which are always pink, and leaves which appear only after the inflorescences have died. The close similarity between Jacquin's plate of *H. amarylloides* and the Vanrhyns Pass collection of Thomas, is shown in Figures 1 and 2.

Evidence gathered by Salter and Stapf has shown that Jacquin's collectors Boos and Scholl travelled to Namaqualand in 1786 and 1787, at least as far as Garies (Garside, 1942). Goldblatt (pers. comm.) confirms this from his studies on the family Iridaceae. There is no doubt therefore that *H. amarylloides* could have been described by Jacquin from bulbs gathered by Boos and Scholl, in southern Namaqualand. This Namaqualand species was not known to Baker, thus it is understandable that he applied the name *H. amarylloides* to the somewhat similar, yet distinct, species, of which specimens were known to him at the time, from the eastern Cape Province.

This interpretation means that the name *H. amarylloides* Jacq., must be applied to the species from Namaqualand, now well represented in South African and overseas herbaria. This species, including a new subspecies, is described below and specimens are cited.

The species referred to by Baker as *H. amarylloides*, in the *Handbook of the Amaryllidaceae* (1888) and in the *Flora Capensis* (1896), is given the next available epithet, namely, *Haemanthus montanus* Baker.

## SYSTEMATIC TREATMENT

**Haemanthus amarylloides** Jacq., Hort. Schoenbr. iv: 5 t. 408 (1804). Type: South Africa, Cape of Good Hope, Plate in Jacq., Hort. Schoenbr. iv: t. 408. 1804 (lectotype).

*Bulb* globose to pyriform, solitary or forming clumps, up to 70 mm diam., medianly compressed when young but circular or slightly laterally compressed in cross section when mature; tunics dying down obliquely, the dead parts remaining as a dark brown papery covering. *Leaves* 2, rarely 3, appearing after the inflorescence, erect, becoming prostrate when old, lorate to oblanceolate, 100–260 (–340) mm long, (8–) 18–45 (–65) mm wide near the middle; blade flat, shiny green to yellowish-green on both surfaces, unmarked or sometimes flushed with maroon towards the base of the outer surface, glabrous; margin or the tip only sometimes reddened or thickened and opaque. *Peduncle* slender, up to 22 mm long, 7–12 mm by 4–5 mm wide, pink to deep wine-red, glabrous or densely hirsute with short stiff hairs. *Umbel* obconical to spherical, spreading, 40–75 mm across. *Spathe valves* 4–9, spreading and soon becoming reflexed, shorter than or equalling the flowers, triangular, 23–38 mm long, 4–11 mm broad at the base, pale pink to deep rose, sometimes with deep maroon mottling, membranous; tip acute. *Flowers* 15–115, lax, pale pink to rose. *Pedicels* (8–)10–15(–23) mm long, pale to very deep pink. *Perianth* 7–14 mm long; tube 0,5–2 mm long, smooth, narrowly funnel-shaped; segments spreading, linear to lanceolate, 6–12 mm long, 0,75–2 mm broad; tips obtuse to acute. *Filaments* exserted by 2–7 mm, pale pink to white above. *Anthers* 1–1,5 mm long when open, yellow. *Ovary* subglobose, 2–3 mm diam., greenish to maroon. *Style* slightly exceeding the stamens. *Berries* ovoidal to spherical, firm, about 10 mm diam., pale pink with a deep pink flush, in a loose cluster. *Seeds* 1–2, globose, reddish-brown.

Flowering time: March–April or a month earlier when in cultivation.

Leafing period: from May to October; usually the leaves are grazed back early in the season in areas stocked with goats and sheep.

Distribution: concentrated in Namaqualand between Springbok and the Kamiesberg, with a few outlying populations south, in the Nieuwoudtville area, restricted to elevations of 600 m or more.

*Haemanthus amarylloides* is distinguished from all the other species of *Haemanthus*, in which the inflorescences and leaves appear separately, by the following characters. The leaves are erect, lorate, 8–65 mm wide and glabrous. The blades are flat, shiny green and unmarked. The umbel of pink, loosely arranged flowers, is surrounded by 4–9 spreading pink membranous spathe valves.

The species is considered here to have two subspecies. These differ to some extent in geographical range and in the morphology of the inflorescence. Some overlap, in the distribution of both subspecies, occurs at Grootvlei, but the morphological differences between populations north and southeast of this area are considered constant enough to constitute separate subspecies.

## KEY TO THE SUBSPECIES

Spathe valves 4–5; number of flowers per umbel 15–40; perianth 12–14 mm long, rarely less; segments 1,5–2 mm wide .................... a. subsp. **amarylloides**

Spathe valves 6–9, rarely 5; number of flowers per umbel 50–115, rarely less; perianth 7–10 mm long; segments 0,75–1,5 mm wide ....... b. subsp. **polyanthus**

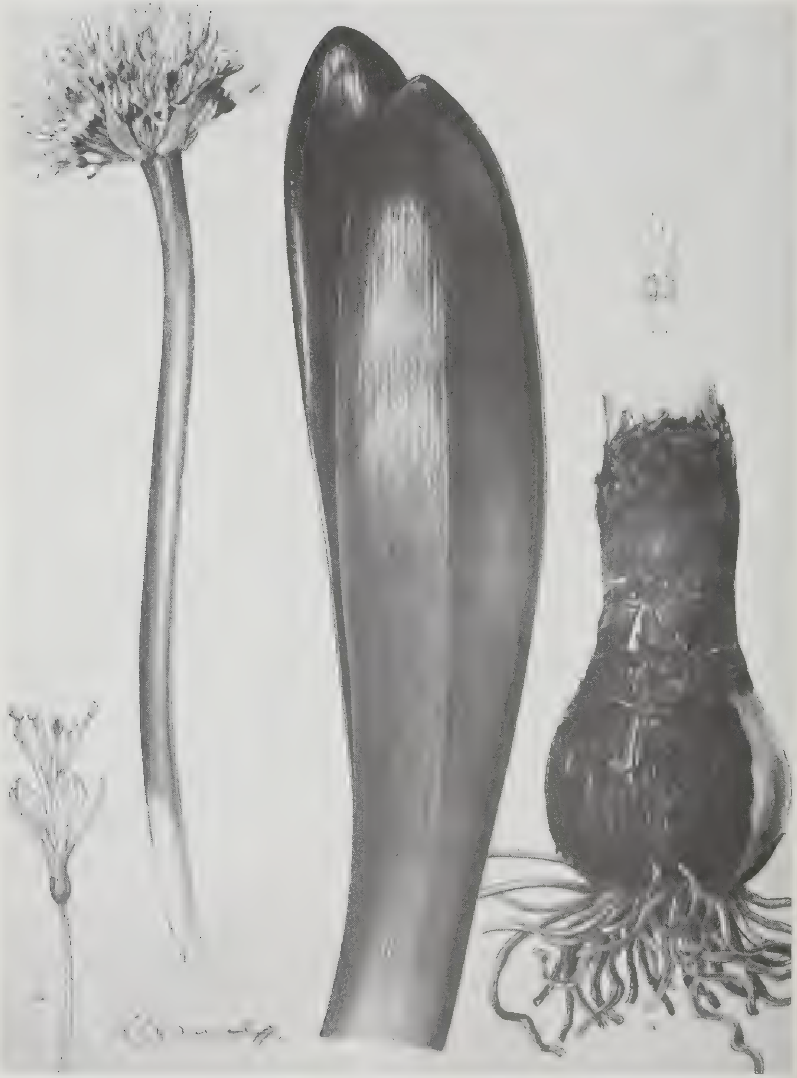

FIG. 3.
*Haemanthus amarylloides* Jacq. subsp. *polyanthus* Snijman (*Snijman 190,* Grootvlei) 1, inflorescence × ¾. 2, flower × 1½. 3, half flower × 2¼. 4, bulb × ¾. 5, leaves × ¾.

a. subspecies **amarylloides**

*H. amarylloides* (Jacq.) Herbert, Amaryllid: 233 (1837), (as *H. amaryllidioides*, orth. var.).

*Melicho amarylloides* (Jacq.) Salisb., Gen.: 130 (1866).

*Amaryllis haemanthoidea* Tratt., Gartenpfl.: 38 (1821), nom. superf. Type: As for *H. amarylloides* Jacq.

*Leaves* erect, lorate, 100–250 mm long, 8–40 mm wide, occasionally with thickened opaque margins. *Peduncle* slender, glabrous. *Umbel* obconical. *Spathe valves* 4, occasionally 5, pink, usually with some dark maroon mottling when dried. *Flowers* 15–40, pink. *Perianth* (10–)12–14 mm long; tube 2 mm long; segments oblanceolate (8–) 11–12 mm long and 1,5–2 mm broad. *Filaments* exserted by up to 3 mm.

Distribution: Localised populations occur at Grootvlei and on the escarpment near Nieuwoudtville. The habitat ranges from granite derived soils and Namaqualand broken veld in the north-west to Table Mountain Sandstone derived soil and fynbos in the south-east (Fig. 4).

CAPE—3017 (Hondeklipbaai): Grootvlei (-BB), *Compton* sub NBG *236/45* (NBG), *Müller-Doblies 79199* (NBG).
—3119 (Calvinia): Top of Vanrhyns Pass (–AC), *Thomas s.n.* (K, NBG, PRE), *Barker 9785* (NBG); Cloudskraal, *Mostert* sub Marloth *13486* (PRE); Nieuwoudtville, *Barker 9669* (NBG).

b. subspecies **polyanthus** Snijman, subsp. nov.

Differt a subsp. *amarylloides* valvis spathaceis 5–9, floribus (40–)50–115, perianthiis 7–10 mm longis, segmentis 0,75–1,5 mm latis.

*Type*: South Africa, Cape Province, 8 km west of national road towards Grootvlei, fl. 28/3/1981, *Snijman 415* (NBG, holotype; K, MO, PRE, isotypes). (Fig. 3).

*Leaves* erect, lorate to oblanceolate, 140–340 mm long, 25–65 mm wide. *Peduncle* glabrous or rough with short stiff hairs. *Umbel* becoming spherical. *Spathe valves* (5–)6–9, pink. *Flowers* (40–)50–115, light pink. *Perianth* 7–10 mm long; tube 1–2 mm long; segments linear 6–8 mm long, 0,75–1,5 mm wide. *Filaments* exserted by 3–5 mm.

Distribution: Populations of approximately twenty or more individuals colonise habitats which are seasonally wet, either in poorly drained flat areas, furrows or seasonal stream beds. The distribution ranges from Springbok to the Kamiesberg in the south (Fig. 4).

CAPE—2917 (Springbok): farm Biesjesfontein, south of Springbok (-DB), *Snijman 420* (K, NBG, PRE); 17 km from Spektakel turnoff towards Komaggas (-DC), *Snijman 185* (NBG, PRE).
—3017 (Hondeklipbaai): ascending Killians Pass from the west (-BA), *Snijman 189* (NBG, PRE); 4,7 km east of Grootvlei (-BB), *Snijman 190* (K, NBG, PRE); farm Skilpad, north of Grootvlei, *NBG Expedition 370/67* (NBG); Bowesdorp, 8 km north of Kamieskroon, *Hall 4195* (NBG); 8 km west of national road towards Grootvlei, *Snijman 415* (K, MO, NBG, PRE); 1 km north of Darters Grave (-BD), *Snijman 192* (NBG, PRE), *Snijman 413* (MO, NBG); Karkams, *Snijman 411* (K, NBG, PRE).
—3018 (Kamiesberg); eastern slopes of Welkom, Kamiesberg (-AC), *Snijman 312* (NBG, PRE).

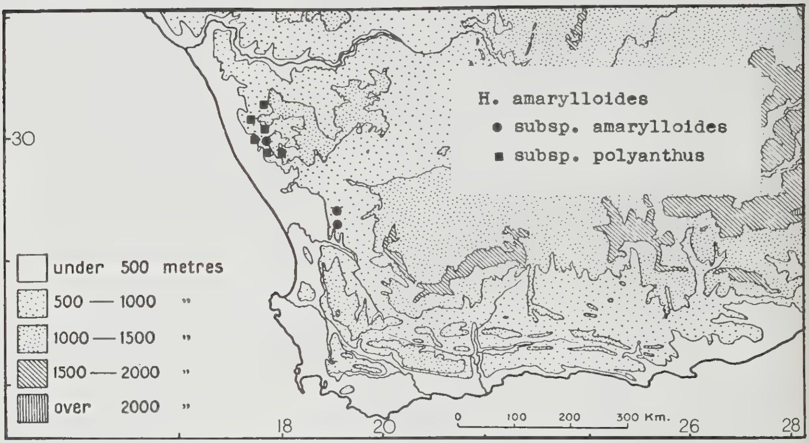

FIG. 4.
Distribution of *Haemanthus amarylloides* Jacq.

**Haemanthus montanus** Baker in Flora Cap. **VI**: 234 (1896).

Type: South Africa, Natal, in valley of Buffalorivier near Charlestown, 5 000–6 000 ft, fl. 8/12/1892, *Wood 4810* (K, holotype; BM, E, PRE, isotypes).

*H. amarylloides* sensu Baker, Handb. Amaryllid.: 68 (1888) and in Flora Cap. **VI**: 234 (1896); sensu Sealy in Curtis's bot. Mag. N.S. **174**: t. 415 (1963); sensu Friis and Nordal in Norw. J. Bot. **23**: 70 (1976) excl. *H. pumilio* Jacq.

*Bulb* ovoid to pyriform, solitary or in clumps, up to 80 mm diam., circular to slightly compressed in cross-section; tunics thick, the edges dying back slightly obliquely, the outer tunics becoming papery and dark brown. *Leaves* 2, occasionally 3, appearing at the time of flowering, rarely a little later, erect, narrowly to broadly lorate, 150–250 mm long, 15–50 mm broad near the middle; blade flat or sometimes twisted, green or glaucous, without markings, glabrous; margin sometimes raised or opaque; tip obtuse. *Peduncle* up to 400 mm long, 7–12 mm across, green to reddish, glabrous. *Umbel* becoming hemispherical, 40–90 mm across. *Spathe valves* 5–8, spreading and soon becoming reflexed, shorter or longer than the flowers, triangular 30–40 mm long, 4–13 mm wide at the base, pale pink, membranous; tip acute. *Flowers* 30–70 or sometimes more, spreading, white, tinged with pink when old. *Pedicels* 10–20 mm long, green. *Perianth* 10–14 mm long; tube 1–2 mm long, somewhat funnel-shaped; segments spreading, lanceolate, 9–13 mm long, 1–2 mm wide; tips acute. *Filaments* slightly exserted, at most by 3 mm, white. *Anthers* 1,5–3 mm long when open, yellow. *Ovary* subglobose, approximately 2 mm diam. *Style* equalling the filaments. *Berries* not seen.

Flowering time: October to December.

Leafing period: appearing from October to December and dying back early in winter.

Distribution: eastern regions of southern Africa, from as far south as King William's Town in the Cape, to the midlands of Natal, the Orange Free State and the Transvaal highveld. Populations of 20 to 200 individuals occur in grasslands either along river banks, poorly drained flats or periodically dry vleis (Fig. 5).

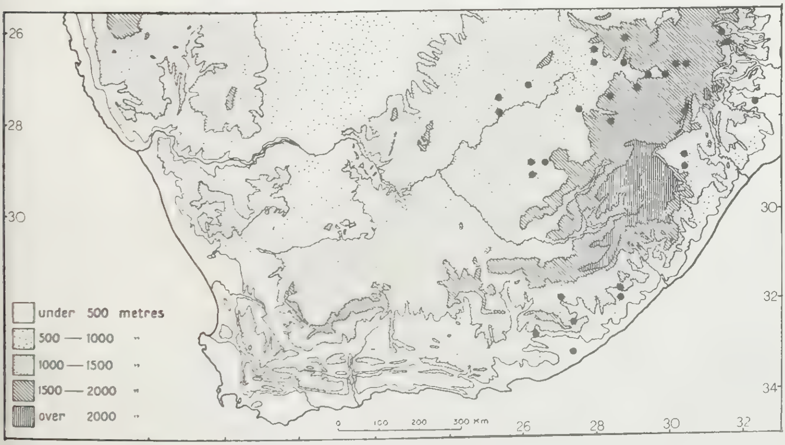

FIG. 5.
Distribution of *Haemanthus montanus* Baker.

The inflorescence of white flowers, surrounded by 5–8 spreading pink spathe valves and the lorate (15–50 mm wide), erect, glabrous leaves which usually appear at the same time as the inflorescence, are all features which, considered together, distinguish *H. montanus* from other species in the genus.

TRANSVAAL—2530 (Lydenburg): 50 miles east of Carolina (-DC), *Reynolds 2143* (PRE).
—2627 (Potchefstroom): 7 miles east of Welverdiend (-AD), *Louw 71* (PRE); near Mimosa Park, Potchefstroom (-CB), *Louw 1100* (PRE).
—2628 (Johannesburg): near Premier Paper Mills, Germiston (-AA), *Codd 4470* (K, PRE); Henley-On-Klip (-CA), *Moss s.n.* (K), *Moss* sub NBG *651/41* (NBG); spruit near Val station (-DD), *Smuts 391* (PRE).
—2629 (Bethal): near Vaal River, Standerton (-CD), *Sim 3590* (PRE); 4 miles west of Morgenzon (-DA), *Mauve 4464* (K); Vereeniging (-DB), *Leslie 10909* (PRE).
—2630 (Carolina): Steynsdorp (-BB), *Dieperink 140* (PRE).
—2725 (Bloemhof): Jantjieshoek, 12 miles north-east of Wakkerstroom (-AC), *Devenish 179* (PRE); Thornhill farm, Wolmaransstad (-BB), *Mainwaring 2794* (PRE); Pringles farm, Christiana (-CC), *Burtt-Davy 5539* (PRE).
—2731 (Louwsburg): 25 miles north-west of Pongola settlement on road to Piet Retief (-BC), *Codd 2105* (PRE).

ORANGE FREE STATE—2727 (Kroonstad): Heilbron (-BD), *Goosens 521* (PRE); farm Rondavel Noord, west of Kroonstad (-CA), *Scheepers 1752* (PRE); 12,8 miles from Lindley on road to Heilbron (-DD), *Marais 1092* (K, PRE).
—2728 (Frankfort): Villiers (-BA), *Kresfelder s.n.* (PRE).
—2826 (Brandfort): farm Peilkop (-CC), *Bourquin 853* (PRE); Glen (-CD), *Heyiule s.n.* (PRE).
—2926 (Bloemfontein): 13 miles north of Bloemfontein (-AA), *Archibald 6129* (GRA).

NATAL—2729 (Volksrust): in valley of Buffalo river, near Charlestown (-DB), *Wood 4810* (BM, E, K, PRE).
—2829 (Harrismith): near Colenso (-DB), *Mauve 4464* (K, PRE); 5 km from turn-off outside Estcourt towards Weenen (-DD), *Van Rensburg 95* (E).

CAPE—3126 (Queenstown): Queenstown (-DD), *Galpin 1676* (GRA, K, PRE), *Everitt s.n.* (PRE), *Koopowitz s.n.* (GRA).
—3128 (Umtata): Gcigcira near Baziya (-CB), *Baur 568* (K, SAM); Munya near Idutywa (-CD), *Evans s.n.* (GRA, PRE).
—3226 (Fort Beaufort): Kagaberg (-CA), *MacOwan 2248* (SAM).
—3227 (Stutterheim): 5 miles south of Cathcart on the Hogsback road (-AC), *Archibald 6097* (GRA).
—3327 (Peddie): Line Drift near King William's Town (-AA), *Leighton* sub NBG 272/32 (BOL).

Inexact localities: Mooi River, Bechuanaland, *Zeyher 1655* (SAM); Buffelshoek, Magaliesberg, *Gilfillan 1406* (PRE); Bamboespruit, *Nelson 244* (K); lower Klipriver, Moss herb. *26866* (PRE); Klip River Valley, *Moss 13806* (BM); Klip River on road from Vereeniging, *Verdoorn 2343* (PRE); Mooi River, Transvaal, *Burke* (K, SAM); Modder River near Bloemfontein, *McNeil s.n.* (K); Kroonstad district, *Pont 523* (PRE); hills between Bedford and Esterhuysens Poort, *MacOwan 2248* (K); between Grahamstown and Bedford, *Dyer 2324* (K); between Gekau and Bashee Rivers, *Drège 4524* (BM, E, K); between Hogsback and Cathcart, *Barker 2352* (NBG).

Doubtful locality: Oudtshoorn, *Ryder 94* (K).

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## REFERENCE

GARSIDE, S., 1942. Baron Jacquin and the Schönbrunn Gardens. *Jl S. Afr. Bot.* **VIII**: 200–224.